

Amendment
U.S. Patent Application No. 10/062,361

REMARKS

Claims 1-3, 6, 7, 9, 10, 12, 13 and 15-24 are pending in the subject application. Claims 1-13, 15 and 16 have been examined and stand rejected. Claims 1, 9 and 16 have been amended, claims 4, 5, 8 and 11 have been canceled in this present amendment, and new claims 17-24 have been added. Support for the amended and new claims can be found throughout the specification. Favorable reconsideration of the application and allowance of all of the pending claims are respectfully requested in view of the above amendments and the following remarks.

Claims 1-13, 15 and 16 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement, due to the following language of claim 1: “including inorganic materials, but excluding organic materials”. Claim 1 has been amended to remove the negative limitation of “but excluding organic materials”. Applicant further submits that the present version of the claims meet the requirements of 35 U.S.C. §112, first paragraph. Accordingly, the Examiner is requested to withdraw this rejection.

Claims 1, 6, 12, 13 and 16 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 5,516,577 to Matsuura et al. In addition, claims 1, 2, 4 and 12-16 stand rejected under 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 5,739,635 to Wakimoto et al. Applicant respectfully traverses these rejections in view of the above amendments and the following remarks.

Initially, Applicant acknowledges and appreciates the Examiner’s withdrawal of the rejection of certain claims in view of U.S. Patent Nos. 5,457,565 (Namiki et al.), 6,509,109 (Nakamura et al.), and 6,013,384 (Kido et al.). Applicant further acknowledges and appreciates the Examiner’s indication that claims 3, 5 and 7-11 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112 and to include all of the limitations of the base claim and any intervening claims.

Amended claim 1 recites an organic electroluminescent device comprising an anode and a cathode, an electroluminescent medium disposed between the anode and the cathode, and an adhesion-promoting layer consisting of inorganic materials in contact with the cathode and the electroluminescent medium. Claim 1 further recites that the adhesion-promoting layer comprises

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at least one metal selected from group 1 through group 15 of the Periodic Table of Elements such that the metal has an atomic number of at least 19, and that the cathode is substantially pure magnesium. It is respectfully submitted that neither Matsuura et al. nor Wakimoto et al. discloses or suggests a device as recited in claim 1, with particular regard to the feature of the adhesion-promoting layer being in contact with the cathode and the electroluminescent medium and including at least one metal selected from group 1 through group 15 of the Periodic Table of Elements such that the metal has an atomic number of at least 19. At best, Matsuura et al. discloses an adhesive layer including a metal compound, and Wakimoto et al. discloses an electron injecting layer that includes a metal compound. There is no disclosure or suggestion that these layers of Matsuura et al. and Wakimoto et al. include a metal as recited in claim 1. Accordingly, the Examiner is requested to withdraw the rejection of claim 1 as being anticipated by Matsuura et al. and Wakimoto et al. and to allow claim 1.

Claims 2, 3, 6, 7, 9, 10, 12, 13 and 15-17 each depend, directly or indirectly from claim 1. Accordingly, these claims should be allowed based at least upon the previous remarks.

In addition, claims 12 and 13 recite that the cathode has a certain percentage of pure magnesium. In particular, claim 12 recites that the cathode is greater than 99% pure magnesium, and claim 13 recites that the cathode is greater than 99.9% pure magnesium. Similarly, new claims 23 and 24 recite an organic electroluminescent device including a cathode consisting of greater than 99% pure magnesium and 99.9% pure magnesium, respectively. While some of the references disclose the use of magnesium for the cathode, there is no disclosure or suggestion in any of the cited references of a cathode having greater than 99% pure magnesium or 99.9% pure magnesium as recited in these claims. Accordingly, claims 12 and 13 should further be allowed based upon these additional limitations, and new claims 23 and 24 should be allowed based upon at least these limitations in combination with the other recited features of claims 23 and 24.

New claim 18 recites an organic electroluminescent device comprising an anode, a cathode that is substantially pure magnesium, an electroluminescent medium disposed between the anode and the cathode, and an adhesion-promoting layer in contact with the cathode and the electroluminescent medium. Claim 18 further recites that the adhesion-promoting layer

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comprises at least one alkaline earth metal compound, where the at least one alkaline earth metal compound includes at least one of Ca, Sr, and Ba. Claim 18 is similar to original claim 5, which has been indicated to contain allowable subject matter. In addition, none of the references relied upon by the Examiner describes an adhesion-promoting layer as recited in claim 18. Accordingly, claim 18 should be allowed.

Claim 19 recites an organic electroluminescent device comprising an anode, a cathode that is substantially pure magnesium, an electroluminescent medium disposed between the anode and the cathode, and an adhesion-promoting layer in contact with the cathode and the electroluminescent medium. Claim 19 further recites that the adhesion-promoting layer comprises at least one inorganic transition metal compound. None of the references relied upon by the Examiner describes an adhesion-promoting layer that comprises at least one inorganic transition metal compound as recited in claim 19. Accordingly, claim 19 should be allowed.

New claim 20 is dependent from claim 19 and should also be allowed based upon the previous remarks. In addition, claim 20 further recites that the at least one inorganic transition metal compound includes at least one of Sb, Ge, Sn, Pb, Ga, Zn, Ni, Pd, Pt, Rh, Ir, Fe, Mn, and Nb. Claim 20 is similar to original claim 8, which has been indicated to contain allowable subject matter. In addition, none of the references relied upon by the Examiner describes an adhesion-promoting layer as recited in claim 20.

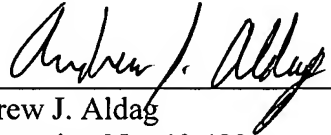
New claim 21 recites an organic electroluminescent device comprising an anode, a cathode that is substantially pure magnesium, an electroluminescent medium disposed between the anode and the cathode, and an adhesion-promoting layer in contact with the cathode and the electroluminescent medium. Claim 21 further recites that the adhesion-promoting layer comprises at least one rare earth metal compound. New claim 22 depends from claim 21 and further recites that the at least one rare-earth metal compound includes at least one oxide of La, Ce, Sm, Eu, Tb, Dy, and Yb. Claims 21 and 22 are similar to respective original claims 9 and 11, which have been indicated to contain allowable subject matter. In addition, none of the references relied upon by the Examiner describes an adhesion-promoting layer as recited in claims 21 and 22. Accordingly, these claims should be allowed.

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In view of the foregoing, the Examiner is respectfully requested to find the application to be in condition for allowance with claims 1-3, 6, 7, 9, 10, 12, 13 and 15-24. However, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to call the undersigned attorney to discuss any unresolved issues and to expedite the disposition of the application.

Filed concurrently herewith is a Request for Continued Examination (RCE), including payment of the RCE and excess claims fees. Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 05-0460.

Respectfully submitted,



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